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Name: Mark G. Chretien

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Applicant: Glover, John N.	)	
	)	
Filed: May 27, 1999	)	Art Unit: 1723
	)	
Application No.: 09/320,950	)	Primary Examiner: David Sorkin
	)	
For: Filtering Medium and Method for	)	Attorney Docket No: 105218.04
Contacting Solids Containing Feeds for	)	(formerly 020781.04)
Chemical Reactors	)	

**REPLY BRIEF**

This is an appeal from the final rejection of Claims 59, 61-67 and 69-95 in the above referenced patent application. The Final Office Action was dated August 10, 2009.

Appellant's Appeal Brief was filed on September 9, 2010, and amended September 29, 2010. The Examiner's Answer was mailed on November 26, 2010. This Reply Brief is being submitted in response thereto, within two (2) months of the date of the Examiner's Answer.

The Commissioner is hereby authorized to charge any and all fees that may be required to Greenberg Traurig LLP Deposit Account No. 50-2638 (Order No. 105218.000004).

## I. STATUS OF CLAIMS

### A. Status of the Claims

1. Claims cancelled: 1-58, 60 and 68.
2. Claims withdrawn (but not cancelled): None.
3. Claims pending: 59, 61-67 and 69-95.
4. Claims allowed: None.
5. Claims rejected: 59, 61-67 and 69-95.

### B. Claims on Appeal

Claims 59, 61-67 and 69-95 are presently on appeal.

## II. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether Claims 82-85 and 86-88 are unpatentable under 35 U.S.C. §112, first paragraph, for failing to comply with the written description requirement.

2. Whether Claims 59, 61-67, 69-85, 94 and 95 are unpatentable under 35 U.S.C. §103(a) for obviousness over Kramer in view of Fulton.

3. Whether Claims 59, 61-67, 69-85, 94 and 95 are unpatentable under 35 U.S.C. §103(a) for obviousness over Kramer in view of Fulton, and further in view of Hung.

4. Whether Claims 86-93 are unpatentable under 35 U.S.C. §103(a) for obviousness over Kramer in view of Fulton.

5. Whether Claims 59, 61-67 and 69-95 are unpatentable under 35 U.S.C. §103(a) for obviousness over Kramer in view of Fulton, and further in view of allegedly admitted prior art in Appellant's Declaration filed 28 February 2008 which relates to BT-750.

### III. ARGUMENT

Appellant files this Reply Brief to address certain specific issues raised by the Primary Examiner's Answer.

1. Appellant's Specification Reasonably Conveys Units With "Sharp" Corners to One of Ordinary Skill In The Art.

The Primary Examiner ("P.E.") has rejected Appellant's claims 82-85 under 35 USC §112, first paragraph, as failing to comply with the written description requirement.

Claims 82-85 each include the feature of a ceramic unit having "sharp corners." The P.E. alleges that "there is no description of corners being 'sharp'" in the Appellant's specification. (Examiner's Answer at p. 3).

Appellant has argued that FIGS. 5-11 and FIG. 13 of the drawings all show, to some extent, units having sharp corners. In response, the P.E. alleges that "[w]hile the drawings do show corners, the degree to which the corners are sharp or dull is not reasonable conveyed by the drawings." (Examiner's Answer at p. 11).

The fundamental factual inquiry in determining if an applicant has satisfied the written description requirement is whether the specification conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention as claimed. MPEP §2167; *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1560 (Fed. Cir. 1991)(Exhibit A)(underline added).

It is well recognized that §112 does not require that the text of the specification include a written discussion of the claimed subject matter. Under proper circumstances, the drawings alone may provide a written description of an invention under § 112. Drawings can

constitute an adequate description if they describe what is claimed and convey to those of skill in the art that the patentee actually invented what is claimed. *See Cooper Cameron v. Kvaerner Oilfield*, 291 F. 3d 1317, 1323 (Fed. Cir. 2002)(Exhibit B).

Appellant respectfully submits the following two pages of drawings for comparison and consideration by the Board:

## PAGE A

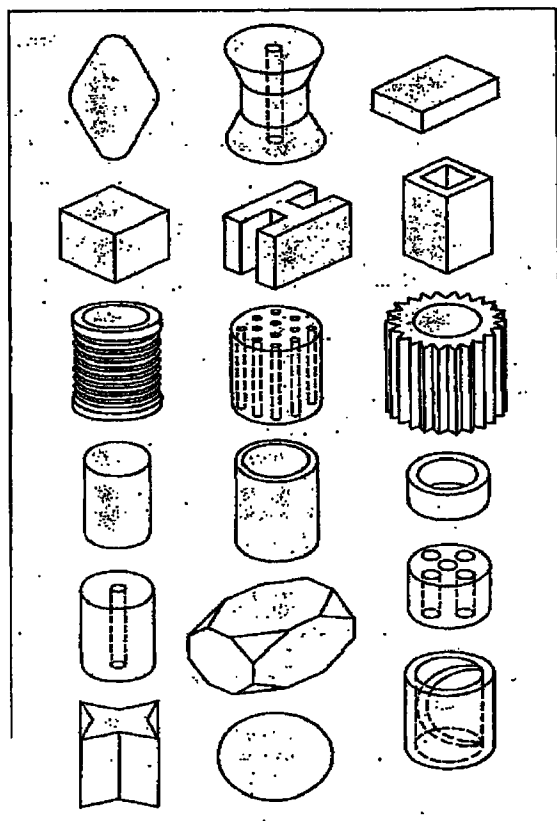
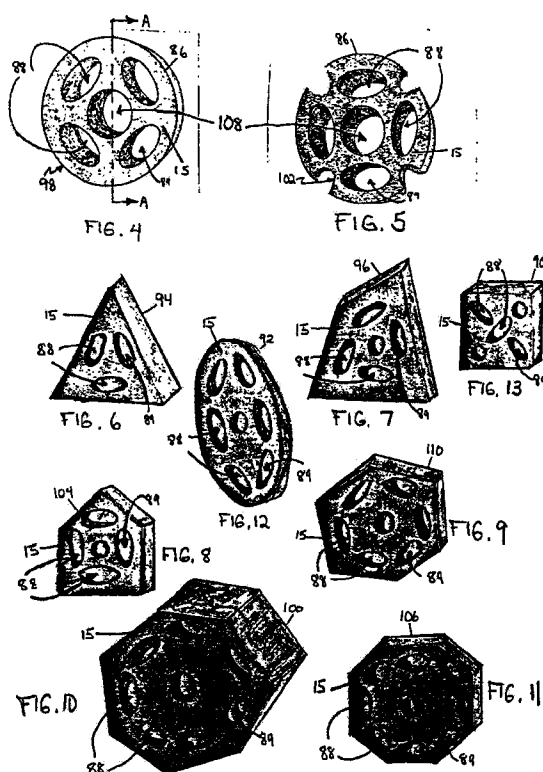


Figure 1 — These catalyst pellet shapes represent only a few of the almost limitless variety possible

## PAGE B

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“Page A” is taken from “CE Refresher: Catalyst Engineering, Part 2” by John Fulton (“Fulton”) which was cited as prior art under 35 USC §103 against Appellant’s claims. “Page B” shows the relevant drawings from Appellant’s original specification.

“Page A” clearly shows units with “sharp” corners. See, for example, the star-shaped polygon in the last row of the far left hand column which has sharp corners.

In the prosecution history for the present application, the P.E. expressly admitted that Fig. 1 from Fulton teaches sharp corners, as follows:

“Regarding claims 82-85, Fulton further teaches units with sharp edges as an alternative to units without sharp edges (see Fig. 1).” (Examiner’s Answer at pages 7-8).

To the extent that Fulton can be relied upon, and is understood, to teach ceramic units with sharp corners or edges, the use of the term “sharp corners” in the present claims would be understood and recognized by those of ordinary skill in the art when used to describe the presently claimed ceramic units.

Appellant’s “Page B” also clearly shows units with “sharp” corners. In this regard, certain ceramic units on “Page B” have very similar corners to those shown on “Page A.” Compare, for example, the corners on the polygon of the last row in the far left hand column of “Page A” with the corners of the units in Fig. 6 and Fig. 7 of “Page B.” The shapes of the corners on these respective units are very similar.

If Fulton conveys “sharp” corners (as admitted by the P.E.), and Appellant’s “Page B” has units with corners that are very similar to Fulton’s corners, then wouldn’t Appellant’s corners also be similarly recognized as “sharp” by one of ordinary skill in the art? It is respectfully submitted that if Fulton can be applied as a reference against Appellant’s claims for this particular feature, and if Appellant’s drawings are very similar to Fulton’s drawings with respect to this feature, then Appellant’s drawings must “reasonably convey” this feature.

In view of the foregoing submission, reconsideration of this rejection is respectfully requested.

2. Rejection of Appellants' Claims 82-85 Based on the Combination of Kramer and Fulton is Improper.

The P.E. has rejected Appellant's claims as being obvious in view of the combination of Kramer and Fulton. In particular, the P.E. has stated that "[w]hile it is true that Fulton explains a disadvantage of sharp corners, Fulton's express teaching of such units as an alternative to other units in Fig. 1 shows that choosing such a unit would have been obvious to one of ordinary skill in the art despite such a disadvantage. (Examiner's Answer at p. 13).

Appellant first submits that Fulton doesn't even teach that a unit with sharp corners is an "alternative" design. Secondly, even if Fulton is a teaching of an "alternative" design, Appellant respectfully submits that a §103 rejection can be overcome if a cited prior art reference "teaches away" from the claimed subject matter.

The prior art's disclosure of more than one alternative can constitute a "teaching away" from any of these alternatives if such disclosure criticizes, discredits, or otherwise discourages investigation into the applicant's claimed invention. MPEP 2143.01; *DePuy Spine Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009)(Exhibit C).

In this case, Fulton expressly criticizes, discredits, and discourages the use of any ceramic units with sharp corners, as claimed by Appellant. For example, Fulton indicates as follows:

“Whereas the shapes into which the catalytic material alone can be formed are limited, the shapes possible for supported catalysts are virtually infinite. (Only a few are shown in Fig. 1). However, many of the shapes can be eliminated because they would not have the structural strength to resist crushing and abrasion, or would not be easy to fabricate. For example, several in Fig. 1 have sharp corners, which would soon crumble in service. The resulting dust and fragments would plug the spaces between pellets, and cause premature buildup in bed pressure drop.” (Fulton at p. 97)(emphasis supplied).

The P.E. has mischaracterized Fulton’s teaching to indicate that sharp cornered units are merely “an alternative to other units.” (Examiner’s Answer at p. 13). Appellant respectfully disagrees with this mischaracterization. Fulton does not indicate that units with sharp corners could be an alternative choice, or even a less preferred alternative choice, to units without sharp corners. Instead, Fulton expressly indicates that units with sharp corners “can be eliminated” from consideration because they would not work. (Fulton at p. 97).

Further, Fulton indicates that there are a “virtually infinite” and “almost limitless” number of possibilities for shapes. *Id.* Of all these possibilities, Fulton expressly selects one choice, units with sharp corners, as being a particularly poor choice due to detrimental features. *Id.* In other words, Fulton teaches that, from among an infinite number of choices, sharp cornered units would be one of the very least desirable choices.

In this context, Fulton is clearly not teaching or indicating that sharp corners are “an alternative” to other units, as alleged by the P.E. Instead, Fulton is criticizing, discrediting, and discouraging the use of sharp corners, thus “teaching away” from any investigation by one of skill in the art into Appellant’s claimed invention.

In addition, the combination of Kramer and Fulton as suggested by the P.E. would make Kramer unsatisfactory for its intended purpose and change its principal of operation. Fulton teaches that units with sharp corners would result in increased dust and fragments, which would “plug the spaces between pellets, and cause premature buildup in bed pressure drop.” (Fulton at p. 97). In contrast, Kramer teaches that key advantages of its units are reduced plugging (Kramer, col. 1, lines 46-47; col. 7, lines 27-30) and low pressure drop (col. 8, lines 20-25). Combining the sharp corners of Fulton (which cause increased plugging and increased pressure drop) with the units of Kramer (which cause decreased plugging and decreased pressure drop) would be detrimental and would diminish the stated advantages of Kramer. In this context, combining Fulton and Kramer to reject Appellant’s claims is impermissible. See MPEP §§2143.01 and 2145(X)(D).

In view of the foregoing submission, reconsideration of this rejection is respectfully requested.

#### IV. CONCLUSION

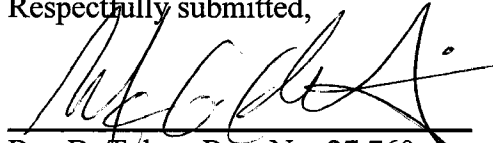
It is submitted that the rejections of claims Claims 59, 61-67 and 69-95 are erroneous, and reversal of the rejections is respectfully requested.

The Commissioner is authorized to charge any fees which may be required (or credit any overpayment), to Greenberg Traurig Deposit Account No. 50-2638 (Order No. 105218.000004).



Date: January 26, 2011

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Ben D. Tobor', written over a horizontal line.

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V. EVIDENCE APPENDIX

This Appendix includes the following items:

Exhibit A: *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1560 (Fed. Cir. 1991)

Exhibit B: *Cooper Cameron v. Kvaerner Oilfield*, 291 F. 3d 1317, 1323 (Fed. Cir. 2002)

Exhibit C: *DePuy Spine Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327  
(Fed. Cir. 2009)